

| | A | B | C | D | E |
|----|-------------------------------------|-----|--------------------------|------------------------------------|----------------------------|
| 1 | Item | Qty | Ref - Des | Desc | Manufacturer's Part Number |
| 2 | | | | | |
| 3 | REQUIRED CIRCUIT COMPONENTS: | | | | |
| 4 | 1 | 10 | C1,C14,C15,C16,C17,C53, | CAP, 1812 2.2uF 10% 100V X7R | TDK C4532X7R2A225K |
| 5 | | | C54,C55,C61,C75 | | |
| 6 | 2 | 2 | C2,C60 | CAP, 100uF 20% 63V ELEC | SUN ELECT. 63CE100KX |
| 7 | 3 | 2 | C3,C49 | CAP, 0805 0.1uF 10% 100V X7R | TDK C2012X7R2A104K |
| 8 | 4 | 2 | C4,C64 | CQP, 0805 4.7uF 10% 16V X7R | AVX, 0805YC475KAT2A |
| 9 | 5 | 8 | C5,C32,C33,C39,C67,C78, | CAP, 0603 0.1uF 10% 50V X7R | TDK C1608X7R1H104K |
| 10 | | | C79,C80 | | |
| 11 | 6 | 1 | C6 | CAP, 0603 470pF 10% 50V X7R | MURATA GRM188R71H471KA01D |
| 12 | 7 | 1 | C7 | CAP, 0603 22pF 10% 50V C0G | AVX 06035A220KAT2A |
| 13 | 8 | 3 | C8,C46,C62 | CAP, 0603 47pF 5% 100V NPO | AVX 06031A470JAT2A |
| 14 | 9 | 2 | C9,C34 | CAP, 0603 10nF 10% 100V X7R | AVX, 06031C103KAT2A |
| 15 | 10 | 2 | C11,C68 | CAP, 0603 0.1uF 10% 100V X7R | MURATA GRM188R72A104KA35D |
| 16 | 11 | 4 | C12,C13,C57,C63 | CAP, 0603 2.2pF 10% 100V NPO | AVX, 06031A2R2KAT2A |
| 17 | 12 | 4 | C18,C27,C59,C71 | CAP, 0603 1uF 10% 16V X7R | AVX, 0603YC105KAT2A |
| 18 | 13 | 4 | C20,C25,C73,C76 | CAP, 150uF 20% 16V ALUM | PANASONIC 16SVPC150M |
| 19 | 14 | 4 | C22,C23,C66,C72 | CAP, 1206 10uF 10% 16V X7R | AVX, 1206YC106KAT2A |
| 20 | 15 | 4 | C30,C31,C51,C58 | CAP, 0603 0.22uF 10% 25V X5R | AVX 06033D224KAT2A |
| 21 | 16 | 2 | C35,C36 | CAP, 0603 1nF 10% 25V X7R | AVX 06033C102KAT2A |
| 22 | 17 | 1 | C37 | CAP, 0603 100pF 10% 100V NPO | AVX, 06031A101KAT2A |
| 23 | 18 | 2 | C40,C100 | CAP, 33uF 20% 63V ELEC | SUN ELECT., 63HVBH33M |
| 24 | 19 | 1 | C69 | CAP, 0603 4.7nF 10% 25V X7R | AVX, 06033C472KAT2A |
| 25 | 20 | 27 | R7,R12,R16,R17,R18,R27, | RES, 0603 0 OHM JUMPER | VISHAY CRCW06030000Z0EA |
| 26 | | | R28,R44,R45,R49,R51,R57, | | |
| 27 | | | R60,R64,R67,R74,R76,R80, | | |
| 28 | | | R81,C81,R82,C82,R83,R84, | | |
| 29 | | | R85,R89,R90 | | |
| 30 | 21 | 1 | D4 | DIODE, ZENER 5.1V | DIODES INC. MMSZ5231BS |
| 31 | 22 | 4 | L1,L2,L5,L6 | IND, 10uH | COILCRAFT SER2918H-103 |
| 32 | 23 | 8 | Q1,Q2,Q3,Q4,Q17,Q20,Q22, | XSTR, MOSFET N-CH 80V 100A TDSON-8 | INFINEON BSC123N08NS3 G |
| 33 | 24 | | Q24 | | |
| 34 | 25 | 8 | Q5,Q6,Q7,Q8,Q18,Q19,Q21, | XSTR, MOSFET N-CH 80V 100A TDSON-8 | INFINEON BSC042NE7NS3 |
| 35 | | | Q23 | | |
| 36 | 26 | 1 | Q33 | XSTR, SMALL SIGNAL, NPN | DIODES INC. MMBT3904 |
| 37 | 27 | 4 | RS1,RS2,RS3,RS4 | RES, 2010 0.003 OHM 1% 1W | VISHAY WSL20103L000FEA18 |
| 38 | 28 | 2 | R_PRG1,R_PRG | RES, 0603 29.4k OHMS 1% 1/10W | VISHAY, CRCW060329K4FKEA |

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| 39 | 29 | 2 | R1,R62 | RES. 1206 2.2 OHMS 1% 1/4W | VISHAY CRCW12062R20FKEA |
| 40 | 30 | 1 | R8 | RES, 0603 100k OHMS 5% 1/10W | VISHAY CRCW0603100KJNEA |
| 41 | 31 | 1 | R9 | RES, 0805 499k OHMS 1% 1/8W | VISHAY, CRCW0805499KFKEA |
| 42 | 32 | 3 | R10,R33,R37 | RES, 0603 10 OHMS 1% 1/10W | VISHAY CRCW060310R0FKEA |
| 43 | 33 | 1 | R11 | RES, 0603 35.7k OHMS 1% 1/10W | VISHAY CRCW060335K7FKEA |
| 44 | 34 | 1 | R14 | RES, 0603 1.5k OHMS 1% 1/10W | VISHAY CRCW06031K50FKEA |
| 45 | 35 | 4 | R19,R20,R63,R66 | RES, 0603 100 OHMS 5% 1/10W | VISHAY, CRCW0603100RJNEA |
| 46 | 36 | 2 | R30,R48 | RES, 0603 90.9k OHMS 1% 1/10W | VISHAY CRCW060390K9FKEA |
| 47 | 37 | 5 | R32,R35,R38,R39,R40 | RES, 0603 10k OHMS 1% 1/10W | VISHAY CRCW060310K0FKEA |
| 48 | 38 | 4 | R34,R43,R52,R86 | RES, 2010 0.001 OHM 1% 1W | VISHAY, WSL20101L000FEA18 |
| 49 | 39 | 2 | R36,R41 | RES, 0603 392k OHMS 1% 1/10W | VISHAY CRCW0603392KFKEA |
| 50 | 40 | 1 | R42 | RES, 0603 3.3k OHMS 5% 1/10W | VISHAY CRCW06033K30JNEA |
| 51 | 41 | 2 | U1,U4 | IC, DUAL OUTPUT HIGH VOLTAGE STEP-DOWN CONVERTER | LINEAR TECH. LTC3892EFE-1#PBF |
| 52 | 42 | 1 | U2 | IC, HIGH VOLTAGE BIDIRECTIONAL CURRENT SENSE AMP | LINEAR TECH. LT1999CS8-10#PBF |
| 53 | 43 | 1 | U5 | IC, Op Amp, Comparator and Reference | LINEAR TECH. LTC1541CMS8#PBF |
| 54 | 44 | 1 | U6 | IC, Dual and Quad, Single Supply, Precision Op Amps | LINEAR TECH. LT2078CS8#PBF |
| 55 | 45 | 1 | U7 | IC, Low Power Dual Comparators with Reference | LINEAR TECH. LTC1843CS8#PBF |
| 56 | 46 | 1 | U8 | IC, Multiphase Oscillator with Spread Spectrum Frequency Modulation | LINEAR TECH. LTC6902CMS#PBF |
| 57 | | | | | |
| 58 | ADDITIONAL DEMO BOARD CIRCUIT COMPONENTS: | | | | |
| 59 | 1 | 0 | C10,C19,C26,C38,C83,C84, | CAP, 1210 OPTION | OPTION |
| 60 | | | C85,C86,C87 | | |
| 61 | 2 | 0 | C28,C29,C45,C48,C50,C52, | CAP, 0603 OPTION | OPTION |
| 62 | | | C56,C65,C77,C88,C89,C90, | | |
| 63 | | | C91,C92,C93,C94,C95,C96, | | |
| 64 | | | C97,C98,C99 | | |
| 65 | 3 | 0 | C21,C24,C41,C42,C43,C44, | CAP, 150uF 20% 16V ALUM OPTION | PANASONIC 16SVPC150M OPTION |
| 66 | | | C47,C74 | | |
| 67 | 4 | 0 | C70 | CAP, 100uF 20% 63V ELEC OPTION | SUN ELECT., 63CE100KX OPTION |
| 68 | 5 | 0 | D1,D2,D3 | DIODE, SCHOTTKY 30V, 100mA OPTION | CENTRAL SEMI CMDSH-3-TR OPTION |
| 69 | 6 | 0 | L3,L4,L7,L8 | IND, OPTION | OPTION |
| 70 | 7 | 0 | Q9,Q10,Q11,Q12,Q13,Q14, | XSTR, MOSFET OPTION | OPTION |
| 71 | | | Q15,Q16,Q25,Q26,Q27,Q28, | | |
| 72 | | | Q29,Q30,Q31,Q32 | | |
| 73 | 8 | 0 | Q34,R50,R59,R61 | DO NOT STUFF | NONE |
| 74 | 9 | 0 | R2,R3,R4,R5,R13,R21,R22, | RES, 0603 OPTION | OPTION |
| 75 | | | R23,R24,R25,R26,R29,R31, | | |
| 76 | | | R46,R53,R54,R55,R56,R65, | | |

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| 77 | | | R71,R72,R73,R77,R78,R79 | | |
| 78 | 10 | 0 | R47,R58 | RES, 0603 10k OHMS 1% 1/10W OPTION | VISHAY CRCW060310K0FKEA OPTION |
| 79 | | | | | |
| 80 | HARDWARE | | | | |
| 81 | 1 | 5 | E1,E2,E3,E4,E5 | TURRET | MIIL-MAX 2501-2-00-80-00-00-07-0 |
| 82 | 2 | 1 | JP1 | HEADER, 3PIN, DBL ROW 2mm | SULLINS, NRPN032PAEN-RC |
| 83 | 3 | 2 | JP2,JP3 | HEADER, 2mm, 3PIN | SULLINS, NRPN031PAEN-RC |
| 84 | 4 | 10 | J1,J2,J3,J4,J5,J7,J8,J9, | STUD, TESTPIN | PEM KFH-032-10 |
| 85 | | | J12,J13 | | |
| 86 | 5 | 10 | | LUG RING, #10 | KEYSTONE 8205 |
| 87 | 6 | 4 | MH1,MH2,MH3,MH4 | STANDOFF, SNAP ON | KEYSTONE_8831 |
| 88 | 7 | 20 | | NUT, BRASS 10-32 | ANY #10-32 |
| 89 | 8 | 10 | | WASHER, #10 TIN PLATED BRASS | ANY #10 EXT BZ TN |
| 90 | 9 | 3 | XJP1,XJP2,XJP3 | SHUNT, 2mm | SAMTEC 2SN-BK-G |